Joint Engineering Data Management Information & Control System (JEDMICS)

Air Force

Site Managers' Meeting

PMO Update
Orlando, Florida

NAVAIR

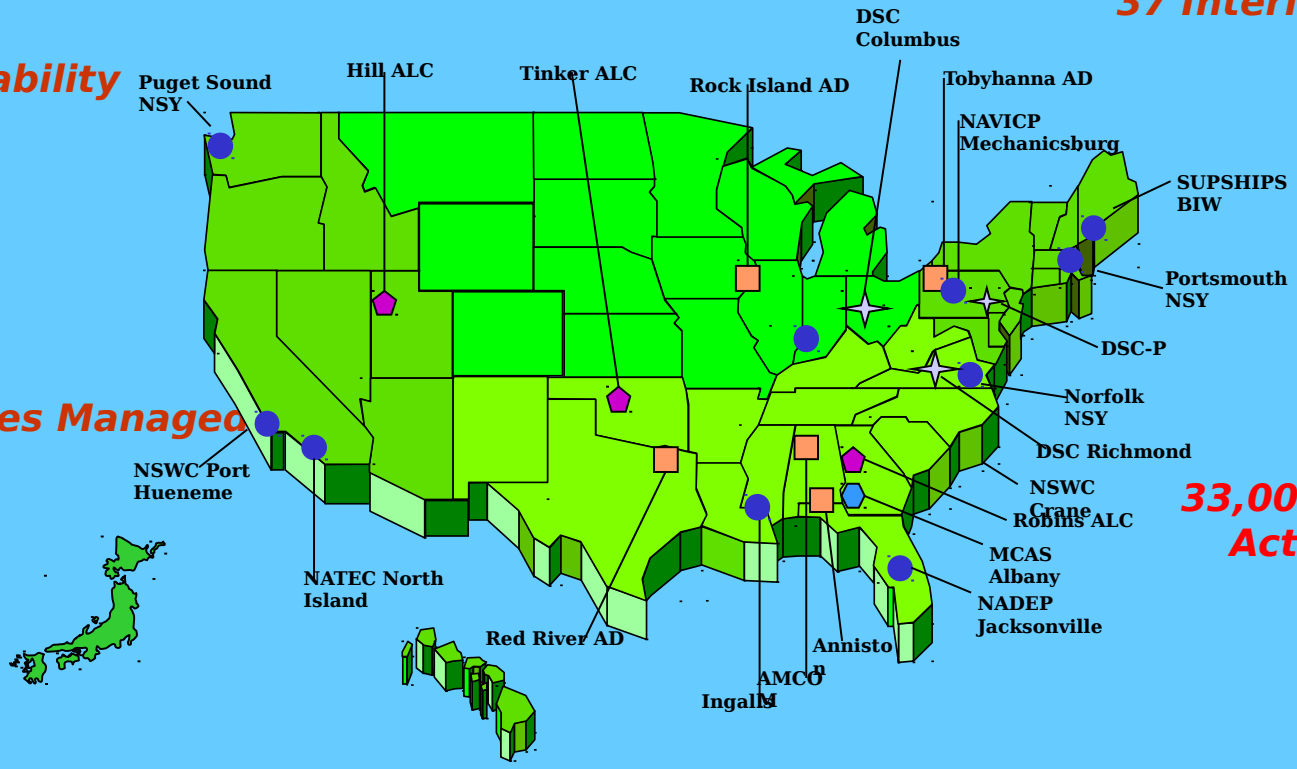
3.3.4

JEDMICS Systems DoD-Wide

- **System:** Department of Defense Standard System for Managing Digital Engineering Drawings and Related Technical Data.
  - COTS Intensive System Integrating 1,196 Configuration Items to Meet Repository Data Management and Access Control Needs
  - System is Scaleable to Meet the Business Needs of Each Repository
  - 22 JEDMICS Repositories Within the Army, Air Force, Navy and Defense Logistics Agency (DLA)

DoD-Wide Interoperability

37 Interfacing Systems



71M Images Managed

33,000 Customers/600 Activity Locations

30M Images Retrieved/Yr.

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JEDMICS: Enabler of Process Improvement

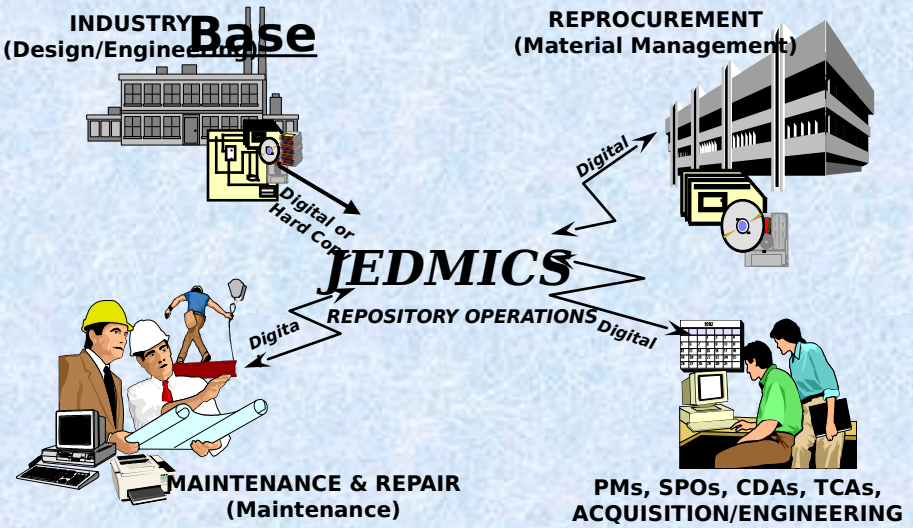
Support to the Base

Tech Data Management					Engineering Analysis
Sustainment /Readiness					
	Repair & Rebuild		Spare Parts Logistics		
	Tech. Data For: TMs TOs	Maintenance Tech. Data Drawings	Competitive Spares Procurement	DLA CIT Tech. Data	
	JEDMICS Tech. Data Repository				
	Configuration Mgmt		Government Industry Tech. Data Exchange		

JEDMICS Data Is Integral To Readiness

Designed to be Part of an Enterprise

Functional Customer



Service Statistics (01/04)

	Images Retrived/Mo.	User Loaded	Images Accts.
Air Force	656,466	17,236,535	9,389
Navy	551,543	38,622,295	16,473
DLA	738,135	8,702,033	3,456
Army	56,296	5,963,071	3,393

Return On Investment (ROI)

JEDMICS ROI Studies **Cost Benefit Analysis**
Savings Investment Ratio

1990	Original EDMICS EA (Navy Model)	1.5
1995	JEDMICS FEA (Army Model)	2.7
1996	JEDMICS 3.0 FEA (Navy Model)	3.2
1997	JEDMICS 3.0 EA & A&E Model)	6.2

- Independently Verified by the Army, Navy and Air Force Centers for Cost Analysis and OSD PA&E
- Period Limited to 5 Years Rather Than 10 to Reflect the Obsolescence Realities Within a COTS Intensive Repository System

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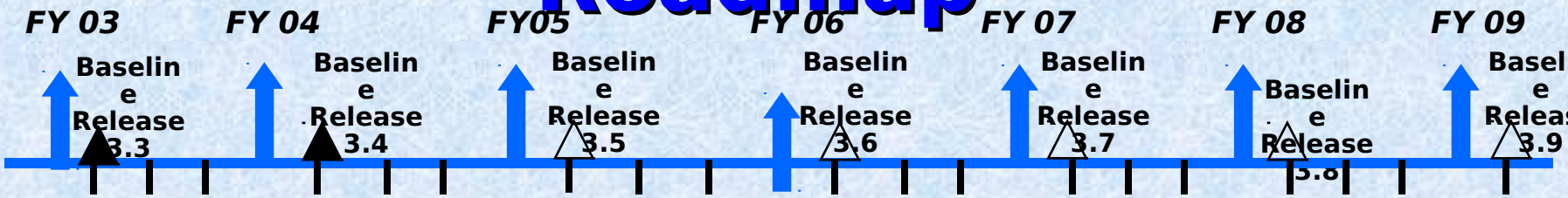
PERFORMANCE MEASUREMENTS

JEDMICS Outcome Based Performance Measures

Enterprise Goal & Objectives	Enabling Steps	Performance Feedback
Improve repository management practices to reduce costs/promote interoperability	Evolve from paper based to a DoD standard digital engineering data repository. Identity opportunities for repository consolidation. Reduce cost in inventory management and repository operations. Establish common business practices/ interoperability DoD-Wide Eliminate loss of data	• 71M images loaded; 33,000 customers; 2.0M retrievals/mo • 50-60% Reduction in repository personnel • 80% Reduction in repository supplies • Single system to manage digital and aperture card data • Enabled consolidation of repositories (NAVAIR 5-2; Air Force 5-3; DLA 4-3) • Data no longer lost/various COOP strategies enabled • 40% Reduction in Administrative Lead Time (ALT) • Data is interoperable DoD-Wide
Improve material management business practices to reduce procurement costs/inventory management	Improve user access/time to obtain data. Reduce aperture card production/reduce technical data distribution costs. Protect competitive procurement/reduce sole source procurements caused by insufficient technical data. Provide engineering data in user format/ reduce data conversion costs Improve user assess via JEDMICS tool sets/ reduce time to obtain data.	• Reduced Inventory Carrying Costs • 80% Reduction in Time to Prepare TDPs for Re-Procurement • Digital data on Web servers and CDs have totally eliminated aperture card TDPs • Tech data related to drawings attached as accompanying documents • Image Retrievals in Less Than 30 Seconds • Digital data delivery lower PMs data costs • Near real time access for ECP analysis, engineering investigations, FOIA
Improve acquisition engineering business practices to reduce acquisition lead-time and costs	Acquire/accept data in manufacturing format/reduce cost incurred to acquire technical data. Reduce cost incurred to maintain and store technical data at commercial facilities. Facilitate updating technical data/reduce time to access specific technical data. Improve user access/reduce time to assemble a technical data package	• Desktop access • Open interface supporting service re-engineering initiatives • Interoperable tools across DoD • Image Retrievals in Less Than 30 Seconds • 614 Formats Allowable • Eliminated aperture cards for ship overhaul (2,129 man-days saved over 3 year period
Improve maintenance and repair business practices to reduce TAT, costs, and promote improved reliability	Improve depot productivity/reduce time to obtain technical data. Improve planning/estimating capabilities/ increase bid responsiveness. Improve user access to data/reduce time to obtain data.	• Saved $1600/false removal by developing local tester (air force) • Promotes local manufacture (enables back order lead time reduction) • Data available upon demand via desktop

JEDMICS Roadmap



Spiral Development/System Sustainment

Maintain Course

SPIRAL DEVELOPMENT

- Responding to Service Infrastructure
- Evolving with Engineering Data Formats
- Evolving with Technology Maturity

SYSTEM SUSTAINMENT

- Maintain Interoperability
- Maintain Performance/Availability
- Maintain Functional Capability
- Information Assurance
- COTS Obsolescence Replacement

DoD/Service Information Technology Initiatives

Service & DoD Mandates

- Networks (NMCI/DISA)
- Desktop Applications (NMCI)
- PKI
- XML
- STEP
- Web
- Section 508
- FIPS 140

DoD/Service Re-engineering/Process Improvements

Service Initiatives

- ERP (Navy)
- BSM (DLA)
- LOG MOD (Army)
- RFI (Air Force)

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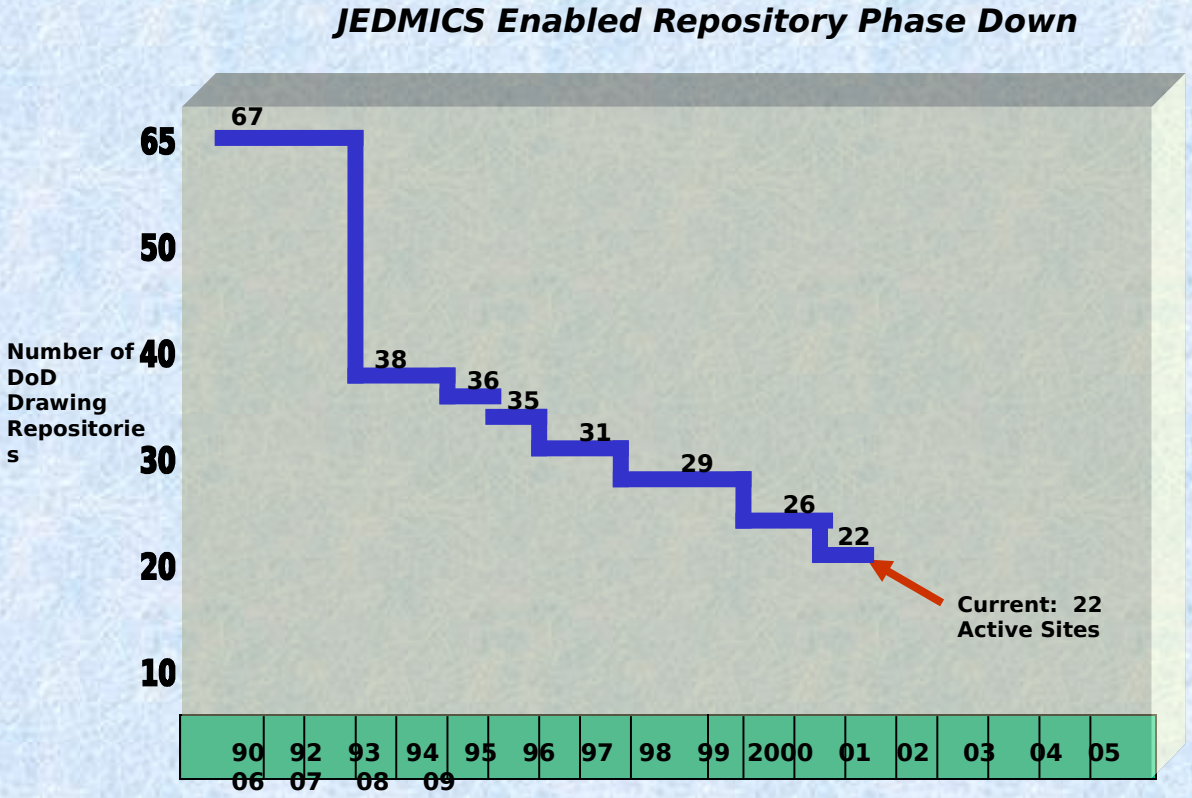
DoD Repository History

1990:
- 67 Repositories Identified
- Navy Had 43 Aperture Card Repositories
- DLA Had 4 Aperture Card Repositories
- Army Had 13 Digital (DSREDS) Repositories; Data Not Exchangeable
- Air Force Had 5 Digital (EDCARS) Repositories; Data Not Exchangeable

1995:
- 38 JEDMICS Fielded
  Navy (18) Army (11) DLA (4) Air Force (5)
- On-line Availability of Data Eliminates Many Repositories
- Data Interoperable Among Services

2004:
- 22 JEDMICS Operational
  Navy (11) Army (5) DLA (3) Air Force (3)
- Service Data Consolidations, BRAC, and Infrastructure Improvements Eliminates 12 Repositories
- Contractor Integrated Technical Information Services (CITIS) Acceptable Alternative to DoD. Near Term Access to Weapon System Data and Long Term Access to Data Rights



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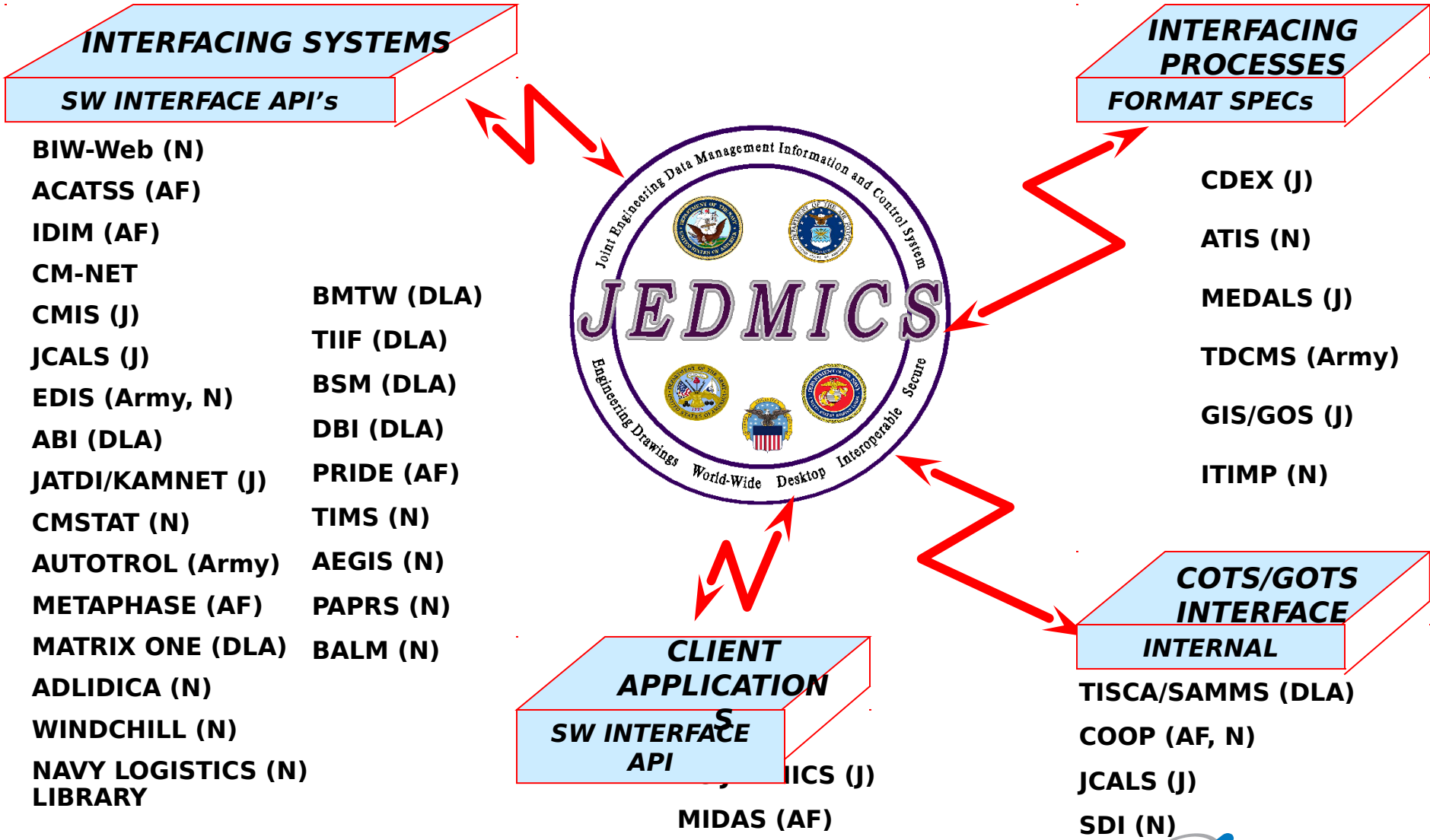
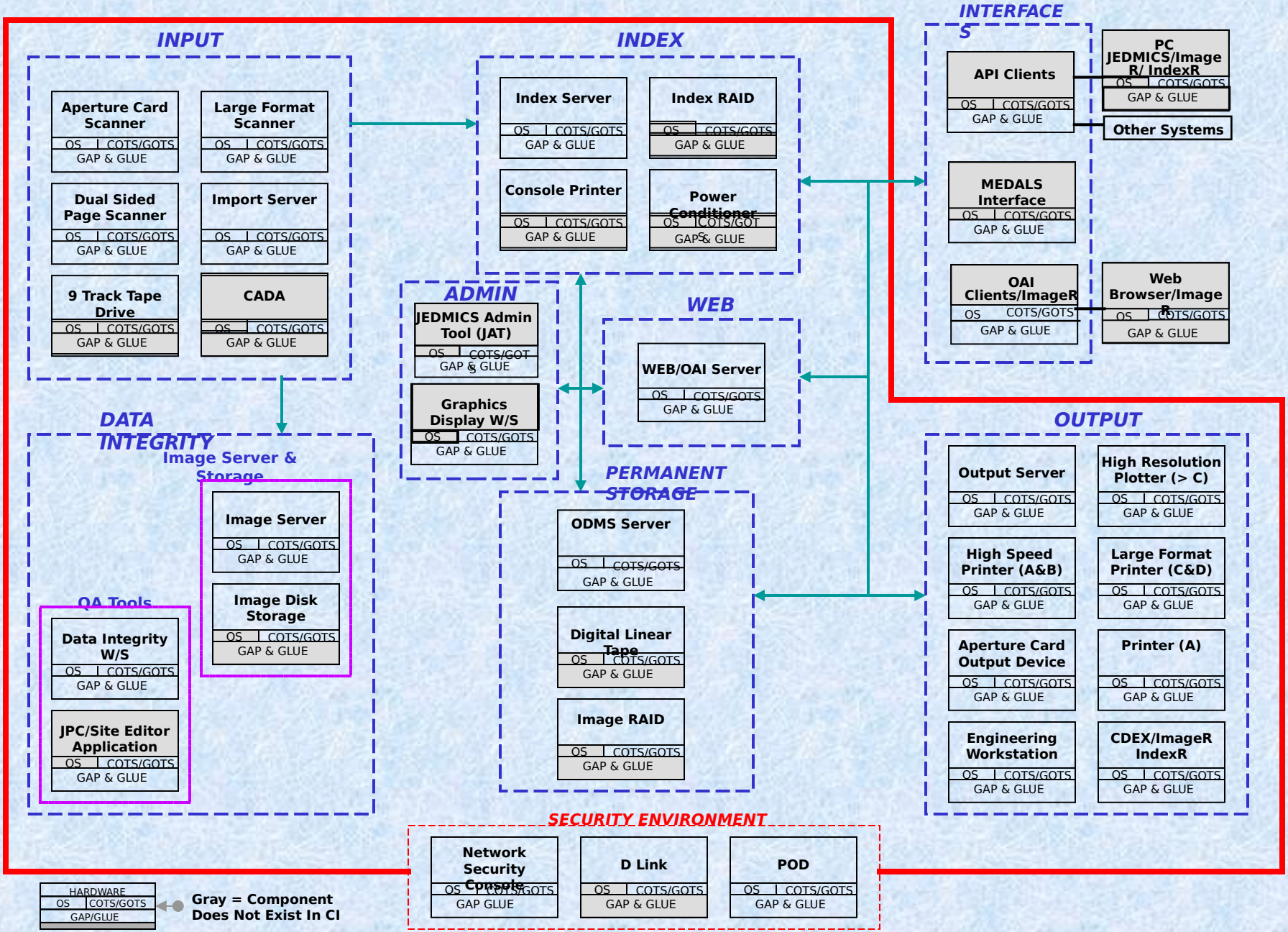
JEDMICS INTERFACE PROFILE



JEDMICS SYSTEM COMPONENTS



JEDMICS - Supporting Mission Goals

Enterprise Goal & Objectives	JEDMICS Enabling Goal Achievement	Fleet (Customer) Feedback
Balance Current and Future Readiness:	• **Current** – Availability of data in the system – 99.7% – Desktop accessibility to data – Enabler of improved material management processes – Enabler of improved maintenance and repair business practices – Interoperability of technical data between the Services – Systems management approach for Information Assurance ($22B in data stored) – No loss of data • **Future** – Joint Vision 2010 (JCS) (Focused Logistics, Automated supply and maintenance information) • Engineering Data via the web – Sea Enterprise (Initiative, Acquisition and material support, increased inter-service integration, part of Naval Transformation Roadmap & Sea Power 21) • Engineering data world-wide via web and web viewing tools • Low cost solution for viewing many engineering data formats (desktop application reduction) • Engineering data interoperable DoD-Wide	• **1MAW Okinawa:** "I am available to discuss how great JEDMICS is" "Cut off my hand but don't take this tool away" • **FSC SE Rework-Solomons:** "Not having JEDMICS would hinder our ability to serve the fleet" (on loss of JEDMICS) "… detrimental impact on NAVAIR, the fleet, and ultimately the Aircraft readiness of our military" • **DLA:** (on accessibility of data) ".. Benefit has been passed on to DLA customers – our Armed Forces" • **NADEP NI:** "…. Putting a price on instant access to information difficult" … JEDMICS is my life blood for drawing access" …. "In addition to our on-line customers .. Critical to NAVAIR's support of the fleet and government agencies requests for data, FMS, FOIA, etc." • **Hill AFB:** (Iraqi Freedom Support) "JEDMICS accessed 2,400 times in support of A-10 Ops" "JEDMICS used extensively in support of F-16 Battle Damage Repair" • **Tinker AFB:** (Iraqi Freedom Support) "JEDMICS web application/help desk support provided Users access to all ALCs" • **SUPSHIPS Pascagoula:** "… our customers have access to the information they need to provide the fleet with emergent support for damage recovery, maintenance and modernization planning and repair" • **NAVAIR-NATEC:** "…providing our customers a single, real time/on-line access point….." • **NAWC TSD:** "…we are able to store and access our documentation seamlessly and still retain control" • **Digital Images available immediately to support ECP analysis, FOIA, FMS, and Engineering Investigation**
Reduce Our Cost of Doing Business:	• **Standard system across DoD** • **Inter-service interoperability of data** • **World-Wide access** • **Delivers engineering data to the desktop** • **Low Cost solution for viewing many engineering data formats** • **Enabler of process improvements using engineering data** – Integrated bid sets – Improved repository management practices – Improved material management business practices reducing procurement costs/inventory management – Improved acquisition engineering business practices reducing acquisition lead-time and costs – Improved maintenance and repair business practices reducing turn-around-time costs, and promote improved reliability	• **Joint Economic Analysis (1997) = 6.2 ROI** – OSD PA&E Directed/Cost Model – Independently verified by Army, Navy, & AF Centers for Cost Analysis and OSD PA&E • **Annual Baseline Releases Continue Cost Savings** – Leveraging technology to reduce footprint – Data receipt/delivery mechanisms evolve with best practices • **DLA: "Reallocated resources previously used to acquire technical data" "… enabled … readily access technical data, reducing time and effort involved with the research and acquisition of data"** • **FSC SE Rework Program-Solomons: "access JEDMICS …assist …. By phone … repair… cost avoidance to DoD** • **SUPSHIP Pascagoula: (Loss of JEDMICS) "would require re-establishment ….. increasing overall costs to update/manage engineering drawings and technical data" "…constantly strive for more efficient ways to do business as evidenced by our JEDMICS process integration"** • **60% Reduction in manpower to run repositories; 80% reduction in repository supplies** • **NADEP NI: "…. Putting a price on instant access to information difficult"** • **Norfolk Naval Shipyard: "… JEDMICS ….a silent but critical "backbone" at NNSY" "…a vital and significant part of the shipyards business process"** • **Hill AFB/Tinker AFB: Iraqi Freedom Support On-line** • **DLA:** 80% reduction in time to prepare TDPs

JEDMICS - Supporting Mission Goals (Cont)

Enterprise Goal & Objectives	JEDMICS Enabling Goal Achievement	Fleet (Customer) Feedback
Ensure Alignment:	**•Joint Vision 2010 (JCS) (Focused Logistics, Automated supply and maintenance information)** – Engineering data via the web – XML Compliant **•Sea Enterprise (Initiative, Acquisition and material support, increased inter-service integration, part of Naval Transformation Roadmap and Sea Power 21)** – Engineering data world-wide web viewing tools – Low cost solution for many engineering data formats – Engineering data interoperability – 37 systems interface to JEDMICS	• **Hill AFB:** (Iraqi Freedom Support) "….accessed 2,400 times in support of A-10 Ops" "….. used extensively in support of F-16 Battle Damage Repair" • **Tinker AFB:** (Iraqi Freedom Support) "…… web application/help desk support provided Users access to all ALCs" • **NAVAIR-NATEC:** "…providing our customers a single, real time/on-line access point….." " JEDMICS is tied to other systems to support … mission needs …. Includes JCALS, JATDI, MEDALS, CMIS, EDIS and NAVICP's CDEX" • **NAVICP-M:** "…. JEDMICS facilitates work process re-design since it brings electronic drawings to the desktop, shop floor or flight line in real time …." • **SUPSHIPS Pascagoula:** "… our customers have access to the information they need to provide the fleet with emergent support for damage recovery, maintenance and modernization planning and repair"
Implement Fleet-Driven Metrics:	• **Availability of data system 99%** • **71,000,000 images available on-line** • **2,500,000 images retrieved monthly** • **33,000 Users across DoD supporting the warfighter** • **Used at 600+ DoD Govt/Industry Locations**	• **Hill AFB:** (Iraqi Freedom Support) "….accessed 2,400 times in support of A-10 Ops" "….. used extensively in support of F-16 Battle Damage Repair" • **Tinker AFB:** (Iraqi Freedom Support) "…… web application/help desk support provided Users access to all ALCs" • **1MAW Okinawa:** "I am available to discuss how great JEDMICS is" "Cut off my hand but don't take this tool away"

JBR 3.5 ECPs

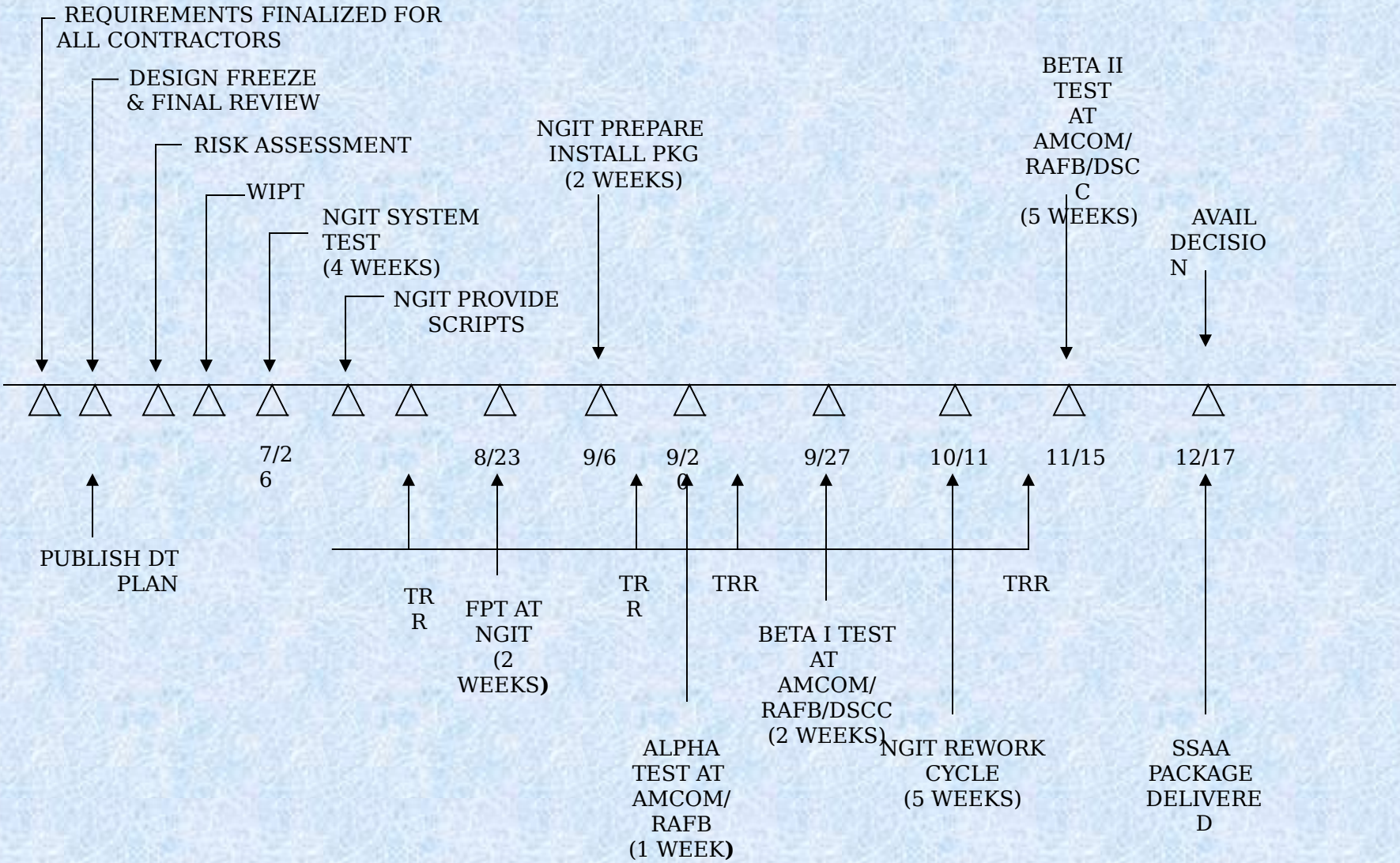
- **ECP 103R13 – OS/DBMS/COTS Tech Refresh**
- **ECP 133R6 - WebJEDMICS**
- **ECP 140R2 - OAI**
- **ECP 144R3 – JEDMICS PC Application**
- **ECP 145R3 – JEDMICS Administration Tool**
- **ECP 148 – 3.5 Baseline Release & Application**

JBR 3.5 ECPs (continued)

- **COTS ECP**
  - **ECP 128 Series –Security Enhancement Upgrade**
- **GOTS ECPs**
  - **ECP 93 Series – ImageR Upgrade**
  - **ECP 94 Series – IndexR Upgrade**
  - **ECP 89 Series – CDEX Upgrade**

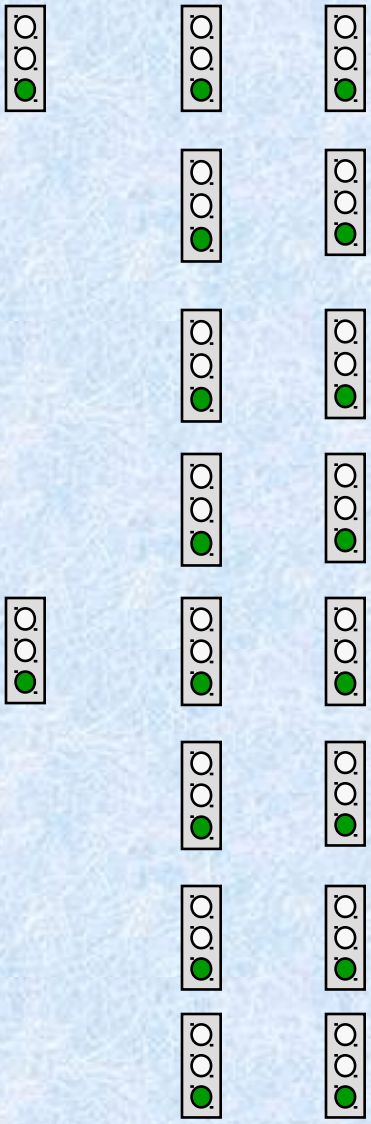
NOTE: These COTS/GOTS ECP Upgrades will be finalized and briefed at a TRB (4QFY04) prior to Baseline Functional Performance Test (FPT).

roposed Baseline Release 3.5 Schedu



PROGRAM RISK CHART

Release 3.3 ***Release 3.4*** ***Release 3.5***



a. Management: Experienced Program Team; CMMI Level 5 Integration Contractor; Defined Management Processes; Weekly IPRs and Bi-Monthly Reviews With Service Reps/Contractor/ Program Team.

b. Schedule: Completed Baseline Release 3.5 Definition and Assessment; Service Endorsement of Release Content Obtained; Program Team In-Place for Development and Test Efforts to Reach IOC.

c. Technical: Contractor is CMMI Level 5. System Architecture Comprised of Commercial Off the Shelf Hardware. IV&V agent. Alpha/Beta testing is part of Development Process.

d. Cost: JEDMICS Baseline Release 3.5 Content for Development, Integration, and Test Consistent With Available Funding. Monthly Financial Reviews.

e. Business: Contracts and Task Orders Are In Place for Program Team to Execute.

f. Fielding: Product Fielding Tied to Security Certifications and Accreditations, Service Infrastructure, Vendor Processes, and Service Funding. NMCI Desktop Process Degrading Navy Capability.

g. Funding: The Navy's FY 2005 Level of Effort (LOE) program/budget assessment review and other marks have resulted in a 15% reduction of the RDT&E budget across the FYDP. Result: Program funding below the APB objective funding level for Baseline Release 3.6.

h. Sustainment Support: Site Maintenance and Tech assist tasks in place

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